WHAT IS CLAIMED IS:

1. A method for detecting and resolving conflicts in association with a data allocation, comprising:

determining the relationship between each of a plurality of positions in a hierarchical organization of data;

selecting a position i;

determining a total weight of position i;

if a total weight of position i is effectively non-zero, removing the influence of position i from the other positions and adding position i to a set of conflict-free positions;

alternatively, if the total weight of position i is effectively zero:

selecting a position k with which position i has a relationship;

reintroducing the effect of position k on the other positions if k is already in the conflict-free set;

removing position k from the conflict-free set if k is already in the conflict-free set; and

if i is not the selected position, removing the influence of position i from the other positions and adding position i to the conflict-free set; and

successively repeating the method for each position, with each successive position becoming position i.

2. The method of Claim 1, wherein:

the positions comprises parents in the hierarchical organization of data and positions i and j comprise parents i and j; and

determining the relationship between a plurality of positions comprises determining a parent-parent relationship matrix identifying the relationships between a plurality of parents.

3. The method of Claim 2, wherein the parent-parent relationship matrix is determined using a parent-child relationship matrix identifying the relationships between each parent and one or more children of each parent.

4.   The method of Claim 3, wherein the parent-parent relationship matrix comprises the matrix $R\Sigma R^T$, where Σ comprises a matrix of the variations of the children, R comprises the parent-child relationship matrix, and R^T is the transpose of R.

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5.   The method of Claim 3, wherein the parent-parent relationship matrix comprises the matrix RR^T, where R comprises the parent-child relationship matrix and R^T is the transpose of R.

10   6.   The method of Claim 2, wherein determining the total weight of position i comprises identifying the diagonal value in the parent-parent relationship matrix corresponding to parent i.

7.   The method of Claim 6, wherein removing the influence of position i
15   comprises performing a *SWEEP* operation on the diagonal value in the parent-parent matrix corresponding to parent i.

8.   The method of Claim 6, wherein reintroducing the effect of position k on the other positions comprises performing an *INVSWEEP* operation on the diagonal
20   value in the parent-parent matrix corresponding to parent k.

9.   The method of Claim 1, wherein selecting position k comprises:
requesting a selection by a user of position k; and
receiving input from the user identifying the selected position k.

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10.   The method of Claim 9, wherein a selection by a user of position k is requested only if position i is included in a pre-defined set of positions for which user input is requested.

30   11.   The method of Claim 1, wherein selecting position k comprises selecting a position having a shared weight with position i that is effectively non-zero.

12.   The method of Claim 1, wherein:

the hierarchical organization of data comprises one or more dimensions; and

the positions are all members of the same dimension within the hierarchical organization of data.

13.   The method of Claim 1, wherein:

the hierarchical organization of data comprises multiple dimensions; and

the positions are associated with multiple dimensions of the hierarchical organization of data.

14.   A system for detecting and resolving conflicts in association with a data allocation, the system comprising one or more software components collectively operable to:

determine the relationship between each of a plurality of positions in a hierarchical organization of data;

select a position i;

determine a total weight of position i;

if the total weight of position i is effectively non-zero, remove the influence of position i from the other positions and add position i to a set of conflict-free positions;

alternatively, if the total weight of position i is effectively zero:

select a position k with which position i has a relationship;

reintroduce the effect of position k on the other positions if k is already in the conflict-free set;

remove position k from the conflict-free set if k is already in the conflict-free set; and

if i is not the selected position, remove the influence of position i from the other positions and add position i to the conflict-free set; and

successively repeat the above steps for each position, with each successive position becoming position i.

15.   The system of Claim 14, wherein:

the positions comprises parents in the hierarchical organization of data and positions i and j comprise parents i and j; and

determining the relationship between a plurality of positions comprises determining a parent-parent relationship matrix identifying the relationships between a plurality of parents.

16.   The system of Claim 15, wherein the parent-parent relationship matrix is determined using a parent-child relationship matrix identifying the relationships between each parent and one or more children of each parent.

17.   The system of Claim 16, wherein the parent-parent relationship matrix comprises the matrix $R\Sigma R^T$, where Σ comprises a matrix of the variations of the children, R comprises the parent-child relationship matrix, and R^T is the transpose of R.

18.   The system of Claim 16, wherein the parent-parent relationship matrix comprises the matrix RR^T, where R comprises the parent-child relationship matrix and R^T is the transpose of R.

19.   The system of Claim 15, wherein determining the total weight of position i comprises identifying the diagonal value in the parent-parent relationship matrix corresponding to parent i.

20.   The system of Claim 19, wherein removing the influence of position i comprises performing a *SWEEP* operation on the diagonal value in the parent-parent matrix corresponding to parent i.

21.   The system of Claim 19, wherein reintroducing the effect of position k on the other positions comprises performing an *INVSWEEP* operation on the diagonal value in the parent-parent matrix corresponding to parent k.
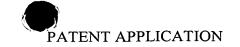
22.   The system of Claim 14, wherein selecting position k comprises:

requesting a selection by a user of position k; and

receiving input from the user identifying the selected position k.

23.   The system of Claim 22, wherein a selection by a user of position k is requested only if position i is included in a pre-defined set of positions for which user input is requested.

24.   The system of Claim 14, wherein selecting position k comprises selecting a position having a shared weight with position i that is effectively non-zero.

25.   The system of Claim 14, wherein:

the hierarchical organization of data comprises one or more dimensions; and

the positions are all members of the same dimension within the hierarchical organization of data.

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26.   The system of Claim 14, wherein:

the hierarchical organization of data comprises multiple dimensions; and

the positions are associated with multiple dimensions of the hierarchical organization of data.

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27.   A method for detecting and resolving conflicts in association with a data allocation, comprising:

determining a parent-parent relationship matrix identifying the relationships between a plurality of parents in a hierarchical organization of data, the parent-parent relationship matrix determined using a parent-child relationship matrix identifying the relationships between each parent and one or more children of each parent;

selecting a parent i;

determining a total weight of parent i by identifying the diagonal value in the parent-parent relationship matrix corresponding to parent i;

if the total weight of parent i is effectively non-zero, removing the influence of parent i from the other parents and adding parent i to a set of conflict-free parents;

alternatively, if the total weight of parent i is effectively zero:

selecting a parent k with which parent i has a relationship;

reintroducing the effect of parent k on the other parents if k is already in the conflict-free set;

removing parent k from the conflict-free set if k is already in the conflict-free set; and

if i is not the selected position, removing the influence of parent i from the other parents and adding parent i to the conflict-free set; and

successively repeating the method for each parent, with each successive parent becoming parent i.

28.   A system for detecting and resolving conflicts in association with a data allocation, the system comprising one or more software components collectively operable to:

determining a parent-parent relationship matrix identifying the relationships between a plurality of parents in a hierarchical organization of data, the parent-parent relationship matrix determined using a parent-child relationship matrix identifying the relationships between each parent and one or more children of each parent;

selecting a parent i;

determining a total weight of parent i by identifying the diagonal value in the parent-parent relationship matrix corresponding to parent i;

if the total weight of parent i is effectively non-zero, removing the influence of parent i from the other parents and adding parent i to a set of conflict-free parents;

alternatively, if the total weight of parent i is effectively zero:

selecting a parent k with which parent i has a relationship;

reintroducing the effect of parent k on the other parents if k is already in the conflict-free set;

removing parent k from the conflict-free set if k is already in the conflict-free set; and

if i is not the selected position, removing the influence of parent i from the other parents and adding parent i to the conflict-free set; and

successively repeating the method for each parent, with each successive parent becoming parent i.